

A PARENT-ADMINISTERED PROGRAM TO REDUCE CHILDREN'S TELEVISION VIEWING

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A parent-administered program to reduce television viewing of primary school-aged children was tested on two boys and three girls from three different families who were heavy viewers of television. Children were given 20 unearned tokens each week by their parents, which they could exchange for up to 10 hours of viewing time. The child earned a gold token for viewing in accordance with the rules for 4 consecutive weeks, which was exchanged for a reward. Parents were given instructions to follow the program independently. Data on hours of television viewing, homework, and reading were recorded each day by one or both parents. A multiple-baseline analysis of the effects of the TV reduction program indicated that children reduced their baseline television viewing by more than half once the program was implemented, and continued to maintain these changes 6 months and 1 year after the program was discontinued. Reading time increased for all children whereas effects on homework varied across children. The results support the effectiveness of a parent-administered program for nonbehavior problem children who watch excessive amounts of television.

DESCRIPTORS: television, homework, reading, parents, children

Children in North America watch, on the average, 24.5 hours of television per week (Comstock, Chaffee, Katzman, McCombs, & Roberts, 1978). Literature regarding the effects of heavy viewing (greater than 15 hours/week) of currently available television fare has indicated that children may be affected in many ways (Murray, 1980), although the extent of television's direct influence on child development is still unknown (Rubinstein, 1983). Studies commissioned by the National Institute of Mental Health to investigate the effects of television on children's behavior led the agency to conclude that violence on television may promote aggressive behavior by children and stereotyping of social behavior (Rubinstein, 1983). Furthermore, Morgan (1980) and Hornik (1978) have shown that children who watch greater amounts of television perform more poorly on reading tests and homework completion, suggesting an inverse relationship between heavy viewing and school achievement. These findings on the relationship between TV viewing and undesirable behaviors among some children have led to in-

creased concerns over the quality and quantity of children's viewing, and increased emphasis on teaching children critical television viewing skills (Murray, 1980; Singer, 1983).

Evidence accumulated over the past 15 years has clear implications for behavioral scientists and practitioners. Researchers stress that, in general, children spend more time watching television than they spend in school and, possibly, in direct communication with their parents (Singer, 1983). Given the possible dangers as well as benefits of television viewing by children, excessive television viewing seems to be an issue that is best defined by the parents of the child. Although television viewing per se is not likely to be a primary factor in child behavior and learning problems, parents may wish to limit the amount or type of viewing by their child as a precautionary measure to reduce academic problems or social avoidance behavior. In particular, a young child who has been free to watch television as often as he or she wishes may fail to decrease viewing time as academic demands increase at an older age.

We evaluated a method for assisting parents who wish to decrease their child's excessive television viewing and possibly to increase desired al-

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ternative behavior as a substitute. Children were given unearned tokens permitting them up to 10 hours of television viewing per week. By budgeting their tokens and in turn their TV viewing, the children could decrease their baseline rate of TV viewing. In addition, children could earn rewards at monthly intervals for complying with the program. Measures of reading and homework time were recorded covertly by the parents to evaluate the positive benefits of the program on other desirable activities.

METHOD

Participants

Participants were solicited through a newspaper article, a television advertisement, and contact with a local Parent Teacher Association group. Five children from three families participated in the study. Heidi, age 8 and Mark, age 11 from Family 1; John, age 11 from Family 2; and Carrie, age 10 and Mary, age 12 from Family 3. All children resided with both natural parents.

The three families were from working class neighborhoods and were rated 4 on a 9-point scale of socioeconomic status (1 = low, 9 = high) based on father's and mother's occupation(s). We screened children for absence of excessive behavior problems by interviewing the parents and completing the Achenbach Child Behavior Profile (CBP; Achenbach, 1979). None of the children or family members was receiving any form of mental health services, and the children's CBP scores were within the normal range on this instrument. Two children (John and Carrie) were performing below average at school and had previously received special tutoring.

Parents considered their children to be heavy television viewers and indicated that their own previous attempts (e.g., reminders, criticisms) to reduce television viewing had been unsuccessful. All three families indicated that they were eager to modify their child's television viewing due to concerns about the child spending too much time in the house and being "addicted" to television. None of the families had any specific rules for TV viewing, and parents complained that their children

preferred TV viewing over most other activities at home.

Measures

The major dependent variable was number of hours of television viewing by each of the five children per week, as recorded by the parents. Two supplementary activities were also monitored by the parents: homework time and reading time. The total number of hours for each activity was derived from event recording procedures in which the child's continuous involvement in an activity for a quarter hour comprised an event. The parents were requested to record the data according to operational definitions provided. A typed form with this information was reviewed with the parents and left with them for future reference:

Recording procedure for television viewing. (a) Record child's television viewing in the TV guide throughout the day. After the child has gone to bed, calculate the total number of quarter-hour segments viewed and record this information on the data sheet provided. For example, if your child watched a half-hour show in the afternoon and an hour after supper, his total number for the day would be 6. (b) If your child turns the television on but watches it for a period of less than 10 minutes do not count this time. (c) If your child is playing together with a friend or sibling and the television is on, determine which behavior is primary. If it is television, count the time; otherwise, do not count it.

Recording procedure for homework. (a) Homework involves work specifically assigned by the teacher for your child to do, e.g., math, English, or reading a story. (b) Record homework time in quarter-hour segments throughout the day and record the total segments on the data sheet at the end of the day. (c) If your child is doing homework while watching television, count the time and mark the time under both categories. (d) You may ask the child once each day about homework assignments, but try not to alter your regular methods of discussing or supervising homework. If you are uncertain whether the child has been working on schoolwork, do not count the time.

Recording procedure of reading. (a) This cat-

egory includes extracurricular reading, e.g., comic books, magazines, or books, for his or her own interest. (b) Reading books for school book reports should come under this heading, as well as books for read-a-thons. (c) Count reading in quarter-hour segments and record the total each day.

During baseline the children were not told that their TV, reading, and schoolwork were being recorded or that their TV viewing was going to be decreased. During the program phase, the children were aware that their parents were recording their TV viewing time and number of tokens spent. When the tokens were discontinued, follow-up recordings were conducted periodically without the child's awareness. Television viewing outside the home was not recorded. The mother was the principal data collector in all three families.

To obtain reliability estimates of the parent recordings, both parents were asked to keep independent recordings during the times they were at home together. Observer agreement was assessed on 18% of the total number of recording days. As mentioned previously, each quarter hour of TV viewing, homework, or reading was considered a unit. Interparent agreement was calculated by dividing the smaller number of units recorded for the day by the larger number of units recorded. Across all sessions, agreement for TV viewing ranged from 66% to 99% with an average agreement of 87%. Average agreement for homework was 82% (range 65% to 92%) and reading was 71% (range 52% to 86%).

Procedure

A multiple-baseline design across families was used in this study. Prior to baseline, parents reviewed data recording procedures and had practiced recording for several days. Once reliable and correct procedures were evident, baseline data were collected for a minimum of 7 weeks prior to implementing the treatment program. An envelope containing 21 large, colored tokens and an instruction sheet was given to the parents at the beginning of the treatment phase (one kit per child). The program was explained to the parents as a simple method of teaching their children how to manage their own TV time. This program has been copy-

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Each child received 20 tokens each week. Each token was worth a half hour of TV time and the child was allowed to choose any child-oriented show (e.g., cartoons, family program, science, or history) with the 15 white tokens and any other type of show (within reason) with the five red tokens. The determination of TV show content as well as viewing times was left up to the discretion of the parents. The remaining gold token could be earned by the child for viewing in accordance with the rules for 4 consecutive weeks, and was exchanged for a reward. The child was not permitted to watch television on another child's token or when parents were watching TV, unless the child used a token. Any show that the parent preferred the child to watch was not deducted from the child's tokens.

At the beginning of the program, parents were simply told to explain the full program to the child and to continue with their usual television habits. We did not suggest any negative contingencies in the event of the child's failure to follow the program rules. Parents were given full responsibility to engage the program on their own with minimal contact with us.

All families completed baseline and intervention phases of the study during the school year. The program (i.e., tokens) was withdrawn completely after 3 months of reduced viewing, and parents in Families 1 and 2 continued to record TV viewing, homework, and reading times on the last week of each month during follow-up over 3 summer months and 4 school months. More than a year after the program was withdrawn, these families again recorded data for 1 week in August and 1 week in September. Family 3, however, was unable to provide follow-up data because they moved at the close of the school year.

RESULTS

Figure 1 shows the children's hours of television viewing, homework, and reading each week across baseline, treatment, and follow-up. The number of hours of TV viewing per week for all children

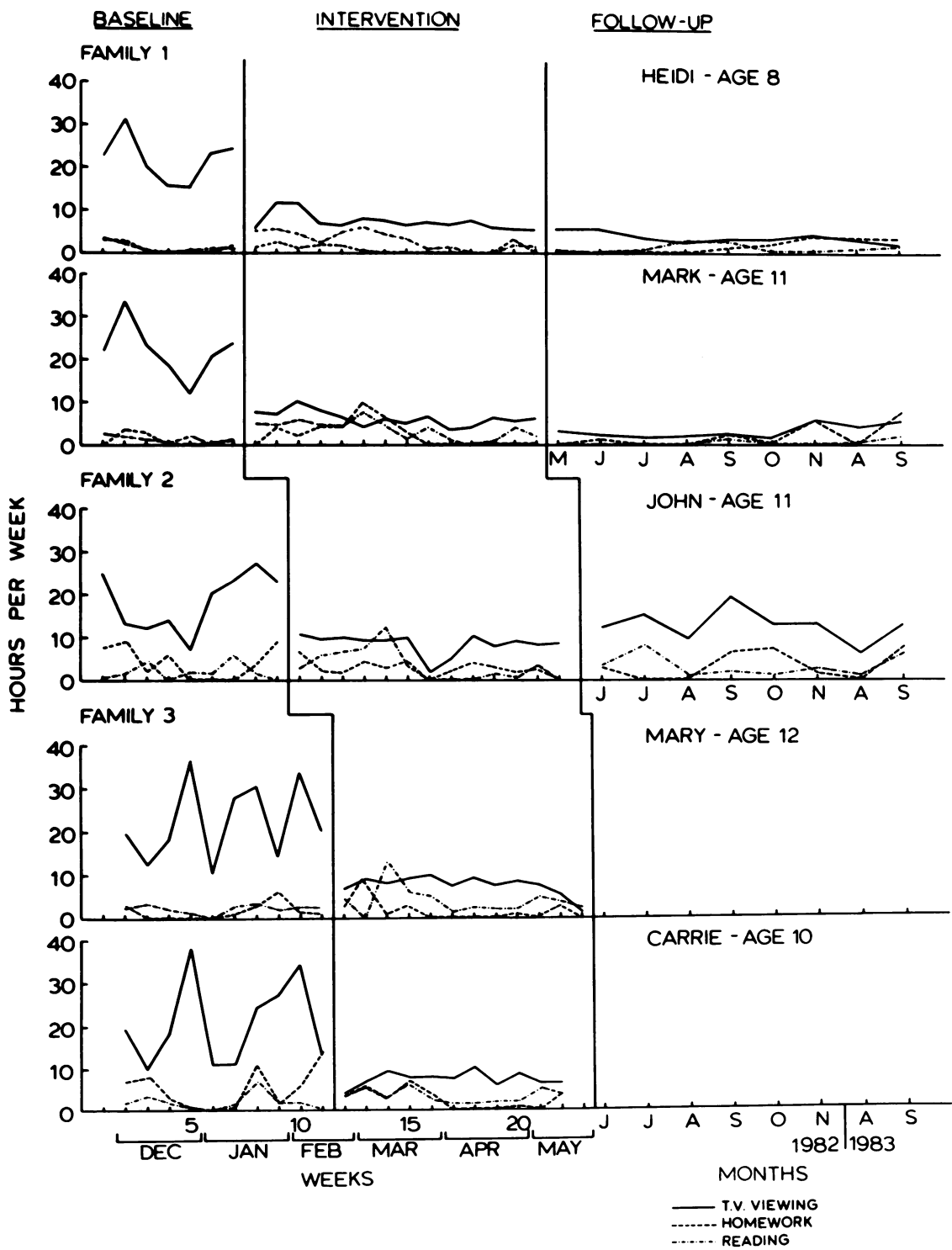


Figure 1. Hours per week of television viewing, homework, and reading for children in Families 1, 2, and 3 during baseline, intervention, and follow-up.

during baseline averaged 21 hours, and except for the holiday season (indicated by week and month at the base of the graph), their viewing seldom fell below 15 hours per week. With the initiation of the TV reduction program there was an immediate decrease in television viewing to 10 or fewer hours per week. The children remained within the 10-hour limit throughout the 3 months in which the program was in effect (except Heidi, who watched 11 hours on two occasions). All children were given a reward (e.g., trip to the zoo, amusement parks) each month for fulfilling their goal. When the tokens were sequentially withdrawn from each family, follow-up data indicated that the two children in Family 1 continued to remain below 10 hours per week throughout summer and once school began. John (in Family 2) increased his viewing slightly once the program was withdrawn, yet averaged 6 hours less per week than in baseline. Satisfactory maintenance of TV reduction was evidenced by parent recordings during the 13th and 14th months following program withdrawal.

Figure 1 also shows that two children (Mark and Mary) moderately increased their homework time when the program began, whereas the remaining three children showed little change in homework hours. The data on reading in Figure 1 indicate that all five children moderately increased the amount of time engaged in reading activities when the TV package was in effect.

DISCUSSION

The reduction of children's excessive television viewing in this study supports the effectiveness of a parent-administered program with children between the ages of 8 and 12 years. Children's television viewing was reduced with a minimum of difficulty or effort encountered by the parents because the program was structured in an enjoyable fashion that provided rewards for compliance. Parents reported that the children enjoyed the game and often saved tokens for special occasions (e.g., friends visiting to watch a movie) or for "peak periods" (e.g., Saturday mornings). In addition, parents reported that children in Family 1 showed

an increased interest in family activities. The child in Family 2 increased his reading and he showed very few outbursts of temper as a result of restricted television viewing, as had commonly occurred on previous attempts by parents to restrict viewing.

Positive benefits from this TV reduction program were evident in the reading time data, which increased over baseline levels for each child. This suggests that the children substituted appropriate recreational activities when TV time was reduced. Homework data were less clear, possibly as a function of variability of homework assigned by teachers (which was not measured). However, no family had expressed particular concern about the child's homework completion but rather were interested in the child developing more varied interests.

Because our study relied on parent-collected data and implementation, recording errors or systematic bias could have been introduced that were not detected. One suggestion for advancing the assessment methodology involves the development of an electronic recording device for home use that would record the time of day and duration of viewing while the set is on. Such a device could be activated by each family member's key or code to record the person(s) viewing, and would eliminate the need for parent recording. Alternatively, researchers could improve the data gathering method presented here by providing parents with a simple-to-use interval recording device that the parent could activate when the child was watching TV, and conducting periodic telephone probes to determine whether the child was watching at that moment.

Limiting or modifying children's television viewing appears to be an appropriate concern for many parents (Eron, 1982; Singer, 1983), and researchers should investigate alternative educational strategies. For some families, simple rules and consequences may be sufficient to control TV viewing, whereas other parents and children may require more assistance and structure. Behavioral methods to increase alternative child behaviors, derived from extensive research in the home and classroom, may offer significant educational and prosocial advantages for the child and parent. Teaching the child to discriminate and select TV

programs, offering the child alternative activities and entertainment, and establishing viewing standards and limits in the family appear to be logical extensions of this study which warrant investigation.

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